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PATENT APPLICATION

Docket No. C0464.097255/GTM

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Washington, D.C. 20231

Sir:

Transmitted herewith for filing is the patent application of

Inventors: Charles B. KATZ et al.

For: METHOD AND SYSTEM FOR PERFORMING CRA, HMDA, AND FAIR
LENDING ANALYSIS AND REPORTING FOR A FINANCIAL INSTITUTION

Enclosed are:

- ☒ Specification and Claim(s).
☒ Oath or Declaration (unexecuted).
☒ 17 sheet(s) of formal drawings.
☐ An assignment of the invention to _____.
☐ Applicants hereby claim the benefit of the filing date of Application Serial No. _____ filed _____ under 35 U.S.C. § 119(e).
☐ Associate power of attorney.

The fee has been calculated as shown below:

CLAIMS AS FILED				
FOR	NUMBER FILED	NUMBER EXTRA	RATE	BASIC FEE \$770.00
TOTAL CLAIMS	22	2	x \$22.00	\$ 44.00
INDEPENDENT CLAIMS	3	0	x \$80.00	\$ 00.00
Fee for Multiple Dependent Claims \$130/\$260				\$ 0.00
TOTAL FILING FEE				\$814.00

- ☐ Unexecuted Verified Statement claiming small entity status is enclosed.
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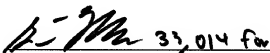
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- ☒ The Commissioner is hereby authorized to charge any fees under 37 C.F.R. 1.16 or 1.17 which may be required during the entire pendency of this application, or to credit any overpayment, to Deposit Account No. 11-0855. A duplicate copy of this sheet is enclosed.
- ☒ A check in the amount of \$814.00 to cover the filing fee is enclosed.
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- ☒ Applicants' undersigned attorney may be reached by telephone in Washington D.C. at

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All correspondence should be directed to the below listed address.

Respectfully submitted,



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United States Patent Application

METHOD AND SYSTEM FOR PERFORMING CRA, HMDA, AND FAIR
LENDING ANALYSIS AND REPORTING FOR A FINANCIAL INSTITUTION

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10014733.082097

TITLE OF THE INVENTION

Method and System for Performing CRA, HMDA, and Fair Lending
Analysis and Reporting for a Financial Institution.

5 FIELD OF THE INVENTION

The present invention relates generally to a system and method for
collecting, reporting, and other loan analysis information management for a large
financial institution, and in particular, to a system that assists a financial institution
10 with extracting relevant data from all of its legal entities and storing this data in a
common repository in a normalized fashion such that the institution may prepare
reports to assist with or fulfill compliance with federal law, such as the Community
Reinvestment Act (CRA) and Home Mortgage Disclosure Act (HMDA).

15 BACKGROUND OF THE INVENTION

Recently, Congress enacted the CRA and HMDA to ensure fairness in
lending by financial institutions. CRA regulations requiring the reporting of small
business lending for legal entities in the United States went into effect January 1,
1996, for data collection. Additional regulations went into effect on January 1,
20 1997, for initial reporting and on March 1, 1997, for data submission reporting.
The requirements apply to small business and farm loans, community development
loan data, and data on lending by consortium or a third party. In addition, some
financial institutions may elect to report consumer loans and affiliations. The
HMDA requires similar reporting regarding home mortgages. Accordingly, all
25 U.S. legal entities processing qualifying loan originations and purchases, credit line
increases, annual renewals, or maintenance for these entities are required to begin
methodically reporting qualified data to a collection unit as of January 1, 1996. In
addition, the following products will be processed as well: all liability products
(consumer and Business & Professional (B&P)) that are Federal Deposit Insurance
30 Corporation (FDIC) insured, Community Development loans, affiliate lending, and
service transactions.

The CRA and HMDA require detailed reporting regarding the lending to individuals based on their geography and financial status. While compliance with these acts is relatively easy for a small bank with a single branch, it is extremely complex for a large bank with many branches and single function offices dispersed throughout the country. It is even more difficult for a global financial institution with offices located all over the world.

As noted above, specific reporting requirements under the CRA/HMDA include: 1) Small Business and Farm Loans; 2) Community development loan data; 3) Data on Lending by consortium or a third party; and 4) Home Mortgage loans.

Small Business and Farm Loans are those with gross annual revenues of \$1 million or less based on revenues that the bank used in making the credit decision. For a banking institution, these loans can include the following: Loans Originated or Purchased; Business Ready Credit and Checking Plus loans; Tailored Lines and Loans; Monthly Payment Business Loans; and Mortgages.

In addition to required reporting, optional data collection and maintenance methods are allowable under the CRA/HMDA. These data collection and maintenance options may be categorized into five broad areas: 1) consumer loans; 2) other loan data; 3) data on affiliate lending; 4) assessment area data; and 5) CRA disclosure statement.

For consumer loans, a financial institution may choose to collect data originated or purchased for consideration under the lending test. The institution's reporting include one or more of the following categories: 1) motor vehicle (including indirect business); 2) other secured (installment); 3) credit card (affiliate lending) business and consumer; 4) home equity; and 5) unsecured. If a portion of a credit line (e.g., home improvement loan) is reported under HMDA and another portion meets the definition of a small business loan, the full amount of the line of credit should be reported as a small business loan. The agencies will also consider as a home mortgage loan the portion of the credit line that is reported under the HMDA.

For data on affiliate lending, the bank may elect to report for consideration loans by any of its affiliates, such as bankcards, leasing, franchises, student loans,

and mortgages. Data must be maintained separately by each category and include the following for each loan: 1) unique alpha/numeric loan number; 2) the loan location; and 3) the gross annual income of the borrower/co-borrower that the bank considered in making the credit decision. For some loan data the bank must
5 provide information concerning its lending performance, including additional loan distribution data.

For assessment area data, the bank must collect and report all data to the Federal Reserve Board starting March 1, 1997, for each assessment area showing the geographics within the areas. For the CRA Disclosure Statement, the Federal
10 Reserve Board will generate annually a CRA Disclosure Statement for each bank on a state-by-state basis. An assessment area consists generally of one or more Metropolitan Statistical Areas (MSAs) or one or more contiguous political subdivisions such as counties, cities, or towns, and includes the geography in which the bank has its main office, branches, deposit taking Automatic Teller Machines
15 (ATMs), as well as the surrounding geographics in which the bank has originated or purchased a substantial portion of its loans, including home mortgage loans, small business and farm loans, and any other loans the bank chooses (e.g., consumer loans on which the bank elects to have its performance assessed).

Under federal law, each bank's assessment area must consist only of whole
20 geographics and may not reflect illegal discrimination. In addition, the assessment may not arbitrarily exclude low or moderate income geographics or extend substantially beyond a MSA boundary, or beyond a state boundary, unless the assessment area is located in a multi-state MSA.

In general, large financial institutions have a need for automated systems and
25 methods for centralizing all CRA/HMDA reporting. This need has not been met by the current art because such financial institutions typically have disparate businesses, affiliates, products, customers and systems, and these hurdles have prevented development of single CRA/HMDA repositories and encompassing processes to handle internal Management Information System (MIS) and federal
30 filing needs. Such system needs include not only management of the complex

organizational and product sets, but also the extremely large volume of loan records these types of financial institutions must report.

A problem with existing art is that, for most banks, there is no central unit responsible for the tracking, reporting and analyzing of data for CRA and HMDA.

- 5 However, for some banks, some data pertaining to CRA and HMDA may nevertheless be tracked based other criteria, such as for preparation of reports to marketplace managers and board of directors.

- 10 Another problem with existing art is that a number of factors may complicate identification of reporting data. For example, there may be multiple databases currently in use to report under the CRA and HMDA, even for a typical banking institution for which data is maintained and organized by computer databases. These databases may be used independently for tracking data, and in some cases there may be no reconciliation to ensure data integrity. Data may be difficult to obtain in a timely fashion, and, depending on the source, may be
15 somewhat in question.

- 20 Another problem is that single purpose offices, such as those located in remote locations for processing credit cards, may further complicate compliance for large financial institutions. All data for each of these offices may be collected by hand and then reported to the bank regulators separately. Since each office may prepare its report without the benefit of data from the other offices, compliance may only be analyzed on a per office basis and at the end of a year, at which time no action can be taken to ensure compliance if the financial institution is out of compliance.

25 SUMMARY OF THE INVENTION

- It is an object of the present invention to solve the problems of existing art by providing a method and system for automatically assisting a large financial institution with its reporting and other loan analysis information management, including those that occur under fair lending requirements of the CRA and HMDA.
30 Specifically, the present invention is directed to a method and system that assists a financial institution with extracting relevant data from all of its legal entities and

storing this data in a common repository in a normalized fashion such that the institution may prepare reports to assist with or fulfill compliance with federal law, such as federal lending laws, including the CRA and HMDA.

It is a further object of the present invention to prepare these reports on a periodic basis such as monthly and annually.

It is a further object of the present invention to store the reformatted and normalized data in a central repository. It is a further object of the present invention to integrate new data with existing data in the repository.

It is a further object of the present invention to provide workstations for outputting compliance reports and analysis using the data, wherein these workstations may provide fair lending and other data on either an individual unit basis or for the whole financial institution.

Additional objects, advantages, and novel features of the invention will be set forth in the following description and will become apparent to those skilled in the art upon reading this description or practicing the invention.

The present invention meets these objectives by providing a system and method for assembling a comprehensive repository from diverse sources and retrieving, in a meaningful way, information from the central repository that is developed. The system and method of the present invention are primarily, but not exclusively useful for supporting large-scale federal data reporting requirements, especially for large financial institutions and internal MIS requirements and reviews.

In a broad sense, the system of the present invention links all of the relevant components of a large financial institution. The direct linkage to these components, which include the branch offices, other access channels, such as telephones, and other elements of the institution (e.g., internal databases), is an important aspect of the invention because it allows direct communication of current data. The present invention thus provides a method and system for collecting and analyzing lending data from all of the components in a timely fashion, such that interim reports may be made available so that changes in lending practices can be implemented to assist with ensuring that the financial institution remains in compliance with the fair

lending acts and other requirements. The present invention also serves other purposes. For example, it helps the financial institution avoid the restrictions that could be imposed for non-compliance and establishes the institution as a community leader and model for other financial institutions.

5 In addition to assisting an institution with compliance needs, such as the requirements of CRA/HMDA regulations, the present invention assists institutions with gaining advantage over their competition by such techniques as analyzing lending practices to predict compliance or non-compliance trends sufficiently early in the lending year to allow changes in lending practices to be implemented in
10 response to identified trends. The present invention also provides internal management with reporting for review of performance against the CRA and HMDA plans or other targets. Furthermore, the present invention permits rapid response to internal or federal regulatory agency audits of reported CRA and HMDA information or other collected or reported data.

15 The present invention is able to handle all the internal MIS and federal filing needs of a very large financial institution with disparate businesses, affiliates, products, customers and systems by virtue of its ability to manage, manipulate, and extract information from these sources. Via this system and method, the present invention not only manages the complex organizational and product sets, but also
20 handles the extremely large volume of loan records a financial institution is required or chooses to report. The present invention enables the financial institution to properly record, geo-code and report all CRA and HMDA eligible mandatory and optional data in correct and expected formats for purposes of submitting necessary reports to regulatory agencies to satisfy the regulation.

25 In an embodiment of the present invention, the method and system includes a central repository, a compliance fulfillment center having a plurality of user workstations, and a variety of sources of data, connected via electronic or other links to the various offices, branches, and other components of a financial institution. In addition to obtaining the data via links with these sources, the
30 present invention utilizes data mapping features to provide standardized reporting so that all data may be reported in a standard form. Pertinent data from the database

links, also known as feeds, are processed as follows: the data is extracted for a processing period, for example, monthly; the data is normalized to a standard format; and the data is geo-coded to obtain FIPS state, FIPS county, census tracts and MSAs.

5 The method and system of the present invention also provides year-to-date data analysis for further processing. In this analysis, the data is geo-coded and regulatory edit checked; the data is analyzed by organization, product, geography, peer-to-peer, and other factors; and presentation grade mapping is prepared. In addition, internal Management Information System (MIS) reports are prepared; and
10 regulatory filings are developed.

 In an embodiment of the present invention, the central repository collects at a single location the data from, for example, the various branches and other elements of a financial institution. In an embodiment of the present invention, the central repository is housed in a mainframe computer, and the data analysis
15 elements are personal computer (PC) based. Master files created by the system are available for ad hoc MIS on the mainframe using data analysis tools.

BRIEF DESCRIPTION OF THE DRAWINGS

20 FIG 1 depicts the high level design block diagram of an embodiment of the present invention.

 FIG 2 depicts a block diagram of the system operating according to an embodiment of the present invention.

 FIG 3 depicts schematically the process for reformatting, normalizing, parsing, geo-coding, and integrating source data used for each input source.

25 FIGs 4A1-3 detail the data elements from the Private Bank Loans CRA file required to fulfill CRA reporting according to the present invention for an example lending institution.

 FIG 4B depicts the Private Bank Loan/CRA product mapping used in an embodiment of the present invention for an example lending institution.

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FIG 4C shows the CRA/HMDA Control Report by Source Product for Private Bank Loans, which provides a listing of all product codes extracted from the source file for an example lending institution.

FIG 4D depicts the field descriptions used in the report shown in FIG 4C.

FIG 4E shows the CRA/HMDA Control Report by CRA/HMDA Product for Private Bank Loans, which provides the totals of extracted loans in the current processing period by government CRA/HMDA product codes for an example lending institution.

FIG 4F depicts the field descriptions used in the report shown in FIG 4E.

FIG 4G shows the CRA/HMDA Source File Reconciliation Report for Private Bank Loans for an individual business, which provides an overall picture of an individual business' CRA/HMDA performance by CRA/HMDA Action type for an example lending institution.

FIG 4H depicts the field descriptions used in the report shown in FIG 4G.

FIG 4I provides a sample of the CRA/HMDA Source File Reconciliation Report for Private Bank Loans for all businesses, which is a Grand Totals summary report used for an example lending institution.

FIG 4J shows the Product Detail Financial Control Balance Report for Private Bank Loans, which provides a listing of all source product codes extracted from a source file during the current processing period for an example lending institution.

FIG 4K depicts the field descriptions used in the report shown in FIG 4J.

FIG 5 depicts a block diagram of the Year-to-Date Master Maintenance component for an embodiment of the present invention.

DETAILED DESCRIPTION

The present invention links the relevant components of a large financial institution as part of a system and method for assembling a comprehensive repository from diverse sources and facilitate retrieving, in a meaningful way, information from the central repository that is developed. The system and method of the present invention are primarily, but not exclusively useful for supporting

large-scale federal data reporting requirements, especially for large financial institutions. The present invention further provides a method and system for collecting and analyzing lending data from all the offices of a financial institution in a timely fashion, such that interim reports may be made available so that changes in

5 lending practices can be implemented to guarantee that the financial institution remains in compliance with the fair lending acts. The method and system of the present invention also serve other purposes. For example, the method and system help the financial institution to avoid the restrictions that could be imposed for non-compliance, and to establish itself as a community leader and model for other

10 financial institutions.

In addition to assisting an institution with compliance needs, such as the requirements of CRA/HMDA regulations, the present invention assists institutions with gaining advantage over their competition by such techniques as analyzing lending practices to predict trends early in the lending year. Such predictions allow

15 changes in lending practices to be implemented in response to these identified trends.

The present invention provides internal management with reporting for review of performance against the CRA and HMDA plans or other targets. Furthermore, the present invention permits rapid response to internal or federal regulatory agency audits of reported CRA and HMDA information or other

20 collected or reported data.

The present invention is able to handle the internal MIS and federal filing needs of a very large financial institution with disparate businesses, affiliates, products, customers and systems by virtue of use of a centralized repository. The

25 present invention not only manages the complex organizational and product sets, but also handles the extremely large volume of loan records a financial institution is required or chooses to report. The present invention enables the financial institution to centrally record, geo-code and report all CRA and HMDA eligible mandatory and optional data in correct and expected formats for purposes of

30 submitting necessary reports to regulatory agencies to satisfy the regulation.

The system of the present invention preferably includes a central repository, a fulfillment center having a plurality of user workstations, and a variety of sources of data, connected via electronic or other links to the various offices, branches, and other components of a financial institution. In addition to obtaining the data via
5 links with these sources, the present invention utilizes data mapping features to provide standardized reporting so that all data may be reported in a standard form. Pertinent data from the database links, also known as feeds, are processed as follows: the data is extracted for a processing period, for example, monthly; the data is normalized to a standard format; and the data is geo-coded (using a computer
10 program such as Harte-Hanks software, a commercially-available system produced by Harte-Hanks Data Technologies of Ellerica, New Hampshire) to obtain FIPS state, FIPS county, census tracts and MSAs.

The method and system of the present invention also provides year-to-date data analysis for further processing. In this analysis, the data is geo-coded and
15 regulatory edit checked; the data is analyzed by organization, product, geography, peer-to-peer, and other factors; and presentation grade mapping is prepared. In addition, internal Management Information System (MIS) reports are prepared; and regulatory filings are developed.

In an embodiment of the present invention, the central repository collects at
20 a single location the data from, for example, the various branches and other elements of a financial institution. In an embodiment of the present invention, the central repository is housed in a mainframe computer, and the data analysis elements are personal computer (PC) based. The central repository could also include a server on a network or a PC. The data analysis elements could also be
25 mainframe or server based. Master files created by the system are available for ad hoc MIS on the mainframe using data analysis tools such as SAS, a commercially-available software product produced by SAS Institute, Inc. of Cary, North Carolina.

The present invention includes a process and resulting repository that will collect and standardize information on new loans, renewals, credit line increases
30 and application decisions for all U.S. based businesses within the organization. This repository contains normalized information on small business, home equity,

motor vehicle, credit card, mortgage, other secured and unsecured consumer products for commercial, community development, consumer, not-for-profit and consortium customers.

The present invention facilitates the establishment of a central CRA/HMDA unit within a bank. The establishment of this unit assists internal management reporting for review of performance against CRA/HMDA plans, filing of CRA/HMDA information to Federal regulatory agencies (OCC, FRS, OTS), and responding to federal regulatory agency audits of reported CRA/HMDA information.

References will now be made in detail to an embodiment of the present invention, an example of which is illustrated in the accompanying drawings.

An overall view of the present invention is shown in FIG 1. Files from the systems supporting the back offices 1-4 of the financial institution are examined and the relevant data 1a-4a is extracted 1b-3b and delivered 1c-4c to the system and reformatted to be compatible with other data.

Thus, data from a variety of sources 1-4 are fed into a computer system that automatically extracts certain types of information, such as data on new loans and credit line increases. The data, which are reformatted, parsed, and then geo-coded using a system such as the Harte-Hanks method 5, is then fed into the MicroData/LAR Preparation 6 portion of the system, where several functions are performed on the data. In an embodiment of the present invention, the MicroData/LAR Preparation 6 includes bankcard data extraction, student loan data extraction for desired assessment areas, control reporting performance, year-to-date master maintenance, top line edit routines performance, backup, archiving and purge processing, and establishment of product, organization, and affiliate codes from the central reference tables.

The data is then fed 7 to the workstations 8 for analysis and report generation. Business data corrections 9 are fed back to the systems supporting the branch systems and then reenter as mainframe transactions. In an embodiment of the present invention, the data is transmitted 7 to a workstation, such as the PCI CRA-WIZ, a commercially available system produced by PCI CRA-WIZ of

Bouton, Massachusetts, for analysis and reporting 6 to facilitate compliance with the CRA and HMDA, including reporting to the appropriate regulatory agency. The repository can then be accessed 7 via workstations 8, such as PCs, and reports relevant to the CRA and HMDA are displayed to users to indicate the financial institution's performance relative to these statutes. These data may be used for internal reporting 11, and preparing reports for state, federal, or other authorities 12. As noted, reporting interface application components include sequential files to support ad-hoc mainframe reporting, such as SAS, and a repository to support other queries, such as generic host or PC-based queries. In addition, portfolio and service information from a separate repository 13 may be reviewed for internal reporting 11 using workstations 14. Compilation of each of these results assists with other analyses of the financial institution, including ongoing performance evaluation and response to audits.

Referring to the high-level block diagram shown in FIG 2, the method and system of an embodiment of the present invention includes several main elements -- System Management 20, Reformatting 21, Normalization 22, File Delivery 23, Data Extraction 24, Parsing 25, Geo-Coding 26, Integration 27, and Micro Data Preparation 28, all of which reside on the mainframe. All of these processes involve communication with and control by a workstation 29, such as PCs.

The operation of an embodiment of the present invention may be more easily explained using an example of reporting by a large banking institution. This application refers to such reporting by using data for Citibank. At Citibank, some of the legal entities that may report CRA and HMDA data include regional marketplaces, mortgages, credit cards, economic development, leasing, and other lending entities.

At Citibank, for required reporting for small business and farm loans under the CRA/HMDA, the system utilizes the following data and methods: 1) a unique alpha/numeric symbol to identify loans; 2) loan amount at time of origination; "Loan Amount" is defined as the size of the line of credit or loan commitment when the line/loan was granted; "Loan Amount" for loan participation or syndication is the entire amount of the credit originated by the lender; the amount of the line

increase is also considered the "Loan Amount" and a new origination; 3) loan location; 4) geo-coding of all business addresses; and 5) reporting by aggregate number and loan amounts and for each geography in which the bank has originated small business or farm loan.

5 For reporting for community development loan data and data on lending by a consortium or a third party, the system as applied to Citibank aggregates the number and amounts for each geography in which the bank originated or purchased a community development loan. For reporting for home mortgage loans, the Citibank version of the system requires information to support reporting by the
10 location of each home loan application, origination, or purchase outside the MSAs in which the bank has a home or branch office.

Each of the various components of the present invention are described in detail below, both in a general sense and as applied to the specific example of Citibank reporting. The Citibank example is intended to demonstrate the versatility
15 of the system, as applied to a large banking institution with disparate branches and other reporting elements. The example is not intended to limit the application of the system to a particular banking institution or institutions nor to indicate necessary or typical reporting or data collection.

20 **System Management**

As shown in FIG 2, in an embodiment of the present invention, the System Management 20 portion of the system serves several functions, including: system audit and control; table maintenance; control of the assessment area and product normalization; and control file processing. In an embodiment of the present
25 invention, the System Management operates on a mainframe, where it creates and maintains two tables that are maintained off-line and backed-up before each monthly cycle begins. The first table, which is referred to as the System Control, contains the procedure prerequisites and dependencies. The second table normalizes products through source product code conversion. A System Control program,
30 which drives all functions, is executed as the first and last step in all jobs.

In addition to maintaining the above tables, in an embodiment of the present invention the System Management module utilizes throughout the system a control file, such as a Virtual System Access Method (VSAM) file, with a key of Date & Process information. This control file controls a task referred to Process Date Maintenance; this task increments the process-date by one month at the beginning of each monthly cycle. This control file also serves to validate procedures, using Verification of Prerequisite Procedures; this file assures that no procedure is allowed to continue unless all prerequisite procedures have been successfully completed for the current month. The Prerequisite Procedures are defined in a Control Table. The control file also conducts Step-to-Step Reconciliation and Period to Period Reconciliation. In this task, the file records counts and balance totals gathered from Prerequisite Procedures are compared to corresponding information in the current procedure; the file then records counts and balance totals gathered from previous executions of the current procedure to compare the current execution. Another function of the control file is Run-Time Recording: the file records start and end dates and times for analysis of potential schedule changes to improve throughput/performance.

Data Extraction

In an embodiment of the present invention, data extraction involves obtaining information relevant to the CRA and HMDA statutes from the various products and services provided by the financial institution. In FIG 3, Data Extraction comprises an element of Feed Data 30. For the Citibank example, these sources include bankcards and student loans.

For Citibank, an existing system, known as Sector CIDBase currently receives files from these systems. This system is described in patent Application Serial No. 08/702,038 Melchione, SALES PROCESS SUPPORT SYSTEM AND METHOD, filed August 23, 1996, which is hereby incorporated by reference. This system is modified to create feed files for the present invention. These programs use the Error Report and Control Totals Module to provide a status of the extraction process.

File Delivery

File delivery includes delivery of the data to the system from the various elements of the financial institution. These data may be from a variety of sources and may use differing operating systems; the data sources can include relational databases. As shown in FIG 3, data from each of these systems is collected monthly and input to the Reformatting 31 and Normalization 32 elements of the present invention; thus, in FIG 3, file delivery comprises an aspect of Feed Data 30.

File Delivery Data Example Using Citibank's Private Bank Loans

To further detail how an embodiment of the present invention applies the system and method to each component of a sophisticated banking institution, this section details information and processes relating to one of the file delivery elements discussed above for Citibank. In order for the data from each of these feeds to be processed, detailed coding and information analysis must be tailored to the type of feed data that the source provides. The following example details data for the Private Bank Loans feed for the Citibank example.

The Private Bank Loans feed contains origination, renewal, and line increase information for both consumer and Business and Professional (B&P) accounts. The CRA process selects CRA eligible accounts from the Private Bank Loans file based on the following criteria: 1) for new accounts, the value in the opening date field of the repository for the account must fall within the processing period; 2) for renewal loans, the value in the renewal date field must fall within the processing period; and 3) for line increases, the value in the line increase date field must fall within the processing period. All accounts supplied on this feed are identified as Private Bank; a further breakdown by business is available for Private Bank Federal Savings Bank (FSB) accounts.

Private Bank Loans produces a new monthly file for the CRA process. A Sector CIDBase program at Citibank receives an extract from the Private Bank Hogan Loans system; this feed includes CRA related fields. Private Bank produces

one file for use by Sector CIDBase and a second file that contains additional loan records for Private Bank Western Hemisphere and Private Bank FSB. Commitment records are also included.

For CRA purposes, the present invention only processes those accounts that are either new bookings or were renewed or received line increases during the current processing period. While the Private Bank Loans file provides information down to the draw level, Sales Support reports CRA information at the note level. Individual draw records are bypassed by the CRA process.

The Private Bank Loans CRA file provides information on letters of credit, full earning loans, non-accrual loans, reserve loans, and suspense loans. At Citibank, Sales Support extracts records for Full Earning Loans (Product Code 'LNS') and Commitments (Product Code 'CMT') -- all other records are bypassed. Sales Support also assigns CRA product codes based on the Compliance approved Private Bank Loans. Private Bank notifies Sales Support when new product codes are created so that this mapping can be updated. Sales Support builds CRA product codes using the source field supplied by Private Bank Loans; additional qualifiers are added to the CRA field to segregate Commercial/Retail and Secured/Unsecured accounts.

Data Mapping

The chart shown in FIG 4A1-3 details the data elements from the Private Bank Loans CRA file required to fulfill CRA reporting. Accounts are identified as CRA eligible if one of three dates (Opening, Line Increase, Renewal) falls within the current processing period.

Processing Notes (referenced in FIGs 4A1-3)

Loan Number

The WS-PBLOAN-ACCT-NUMBER field contains a fifteen digit loan number that can be tied back to the Private Bank Hogan origination system.

Commitment records contain zero values in this field. Standalone loans can be further identified by zero values in the WS-PBLOAN-ACCT-CRA-COMTMNT-NO

field. Individual notes are bypassed in favor of their commitment records. Sales Support populates the loan number field in the following manner.

Standalone Loans

Identify standalone loans by non-zero values in WS-PBLOAN-ACCT-

- 5 NUMBER and zero values in WS-PBLOAN-ACCT-CRA-COMTMNT-NO (if non-zero, bypass record, as this record is part of a commitment).

Commitments

Identify Commitments by zero values in WS-PBLOAN-ACCT-NUMBER.

The commitment number can be found in WS-PBLOAN-ACCT-CRA-COMTMNT-
10 NO.

Product Code

Sales Support extracts records where WS-PBLOAN-PROD-CODE is equal to the designation 'LNS' or 'CMT.' All other records are bypassed. Sales Support builds a seven character product code field, using WS-PBLOAN-PROD-CODE as the initial source of information; this four character code is moved to the last four
15 bytes of the CRA product code field (right-justified, zero filled). The first byte of this field contains a customer type indicator (R = Retail, C = B & P); the second byte indicates if the loan is secured (S = Secured, U = Unsecured); a zero is moved to the third byte.

20 For example, the CRA product code for a Retail, Secured Full Earning loan would be: **RS00LNS**.

R Retail customer
S Secured loan
0 Zero moved to third byte

25 **0LNS** 'LNS' Private Bank product code right-justified, zero filled.

For Commitment records, Sales Support uses 'CMT' as the product code. This allows Sales Support to both identify CRA records that are at the Commitment level and to allow for specific commitments that may have more than one product type at the draw level.

30 Product Mapping

The Private Bank Loan/CRA product mapping is shown in FIG 4B.

Balancing Procedures

Sales Support produces the following reports to facilitate the monthly CRA/HMDA reconciliation process. These reports enable Compliance to perform analysis for each source file supplied for CRA/HMDA.

Report # 1 - Business CRA/HMDA Control Totals by Source Product

The report shown in FIG 4C provides a listing of all source product codes extracted from the source file for a business. A breakdown of CRA and HMDA totals is available, as well as grand totals by product code and business. This report enables Compliance to monitor the performance of a specific product for CRA and HMDA by business.

Field Descriptions

FIG 4D provides the field descriptions for the report shown in FIG 4C.

Report # 2 - Business Control Totals by CRA/HMDA Product Code

The report shown in FIG 4E provides totals for extracted loans in the current processing period by government CRA/HMDA product codes. This report provides Compliance with an overall picture of the business' CRA/HMDA performance within a specific source file.

Field Descriptions (Report 2)

FIG 4F provides the field descriptions for the report shown in FIG 4E.

Report # 3 - CRA/HMDA Monthly Extracted Record Analysis

The report shown in FIG 4G provides an overall picture of the business' CRA/HMDA performance by CRA/HMDA Action type. This report enable Compliance to monitor the total number of loans extracted from the current source file, in comparison to the file's entire portfolio. In addition, this report details the number of originations, renewals, etc., extracted for a business during the current processing period.

Individual Bank Totals

FIG 4G includes individual bank totals.

Field Descriptions (Report 3)

FIG 4H provides the field descriptions for the report shown in FIG 4G.

Grand Totals

The report in FIG 4I provides a sample of the Grand Totals summary for Report #3; this summary enables Compliance to analyze the performance of an entire source file.

Report # 4 - Source Product Code Reconciliation

The report shown in FIG 4J provides a listing of all source product codes extracted from a source file during the current processing period. For Citibank, standard Sector CIDBase marketing codes are included to assist in product analysis. This report highlights any product codes not identified on the source file. These "Unknown" codes are researched and resolved before data is loaded to the CRA repository.

Field Descriptions (Report 4)

FIG 4K provides the field descriptions for the report shown in FIG 4J.

Reformatting and Normalization

In an embodiment of the present invention, the Reformatting and Normalization functions of the system are closely related. Reformatting includes custom data extraction and conversion, reportability determination for both HMDA and CRA, and Loan Type differentiation. Loan Type differentiation includes new loans, line increases, and renewals. Normalization includes identification of initial/default settings, parsing and geo-coding transactions, and product normalization.

Referring to FIG 3, which provides a schematic representation of the various computerized programs comprising the tasks carried out in an embodiment of the present invention, feed data 30 is reformatted 31 and normalized 32 using reformat programs, such as Job Control Language (JCL) programs, tailored for each input source. These programs use Error Report and Control Totals Modules to provide a status of the reformatting process and call a Normalization Module to perform functions that are generic to all feeds, such as output record initialization, product

code normalization, and the generation of transactions that drive the Parsing 33 and subsequent Geo-Coding 34 processes. Thus, dedicated reformatting programs each are tailored to the input files the system must process. Some data, which do not require Parsing 33 and Geo-Coding 34, serve as direct input to the Integration 35 program.

In an embodiment of the present invention, a single JCL procedure is executed by all the reformat jobs. This procedure utilizes a symbolic parameter that allows unique identification of files from each feed. A separate reformat program is specifically tailored to each feed based on the input file processed.

Additional programs may be used by the system to carry out the above described steps. For example, the following program constitutes a separate element used by multiple steps for the Citibank example system. The reformat and integration procedures each call a CRA and HMDA Control Report Module. This module accumulates totals at a variety of levels and provides a series of comprehensive reports to be used for audit trail and system validation purposes.

Parsing

In an embodiment of the present invention, parsing includes Address Parsing (such as the Harte-Hanks system) and Geo-code Transactions. Referring to FIG 3, Reformatted 31 and Normalized 32 data are fed, as necessary based on their format, into the Parser Driver 33. In the Citibank example, the parser program feeds the demographic information into the Sector CIDBase Parser Driver which in turn calls the Harte-Hanks engine and the Sector CIDBase Parser Post Processor. By using the existing Parser Driver, the present invention can utilize the existing normalization logic currently in use by Sector CIDBase. The Parser Driver uses the Error Report and Control Totals Module to provide a status of the parsing process.

Geo-Coding

In an embodiment of the present invention, Geo-Coding includes ZIP Correction and Geo-coding. Referring to FIG 3, Geodata transactions from the Parsing process 33 are fed into Geo-Coding procedures depending on whether they

comprise bankcard or non-bankcard services. Non-bankcard data are processed first by a ZIP Correction program 34a, and then sorted by a Sort program 34b. Bankcard data are simply sorted by a Sort program 34c. All sorted data are then processed by a Geo-Coding 34d program.

For the Citibank example, the Zip Correction program is performed by a Sector CIDBase procedure; the sort program for non-bankcards is performed by another Sector CIDBase procedure; the sort program for bankcards is performed by another Sector CIDBase procedure; and the geo-coding program is performed by another Sector CIDBase procedure. At Citibank, one JCL procedure is used for this job. This procedure concatenates all the geodata transactions from all the Parsing jobs and executes the procedures above. The resulting single Geo-Code file is read into all the integration jobs. The existing copybooks Geodata and Geo-coded Geodata that define the input and output from this job are used as the output definition by the Parsing program and as the input definition by the Integration program.

At Citibank, the Asset/Liability Zip-Correction process utilized may not be used for all non-bankcard feeds. The quality of data from each feed must be evaluated individually. While the above describes the Geo-Coding process as a single job, the job is sometimes run on two occasions: first with data from as many reformats that have run by a certain date, and second, when all reformats have completed with output from all remaining reformats. This improves the overall performance of the system by allowing it to get an early start on Geo-Coding at a time when the system would otherwise be idle.

Integration

In an embodiment of the present invention, integration includes geodata merge, Product Normalization correction, and sort output. Referring to FIG 3, Integration 35 takes the output from the intermediate procedure, Geo-Coding 34, and matches it to Reformat 31 file information. If the information obtained from the intermediate procedure is considered valid (i.e., there was no change to the

"sectional zip" -- the first three digits of the zip code), then the data is added to the Reformat 31 information to create a master file.

At Citibank, integration is achieved using a single program. In addition to merging the information from the two inputs, the Product Code Normalization is repeated to effect any adjustments made to the PRODNORM table that may have resulted from reviewing the output from the Reformat steps. The program uses an Error Report and Control Totals Module to provide a status of the integration process. One JCL procedure developed for this process executes all of the jobs that feed from the reformat process.

Micro-Data Preparation

In FIG 2, Micro-Data Preparation 28 includes a selection of jobs to perform maintenance on the master files and to communicate from and to a desktop editing interface 29; in an embodiment of the present invention, these functions are performed by a commercially available system such as the PCI CRA-WIZ system. The tasks performed by this system include year-to-date master maintenance, product and affiliate code correction, control reporting, assessment state and county extract, desktop data extraction, government editing (e.g., Geo-codes), desktop feed-back merge, and HMDA/CRA Reporting.

The desktop editing interfaces include 1) monthly downloads, such as those containing new originations, new purchases, line increases, commercial loan renewals, and data corrections (affiliate lending information is extracted by assessment area); and 2) monthly uploads with compliance geo-coding results.

FIG 3 depicts Micro-Data Preparation 36 which occurs via a program utilizing the results of the Integration 35 step. The specifics of Year-to-Date Master Maintenance are described further below.

Year-to-Date Master Maintenance

Year-to-Date Master Maintenance is a critical aspect of the present invention because this function assures that data is up-to-date and usable for all of the purposes described above. Assuring this data is up-to-date is a sophisticated

process; in an embodiment of the present invention, the Year-to-Date Masters are built and maintained by accumulating monthly data. Further, there is a Year-to-Date Master for each data feed, and an aggregate Year-to-Date Master incorporating the data from all individual Year-to-Date Masters on one file.

5 Year-to-Date repository maintenance includes file arrival processing, data normalization, master file maintenance, product reference tables, organization reference tables, control reporting/audit trail, marketing geo-coding, back-up and recovery, and archive/purge process.

10 An example from Citibank illustrates the potential complications of this process. FIG 5 contains a block diagram of the Year-to-Date Master Maintenance procedure using the example of Citibank. At Citibank, the monthly data derives from Monthly Masters 100. Data that are already in sequence that do not contain maintenance records are fed directly into the program for Year-to-Date Master Maintenance 101. Data not in sequence and data containing maintenance records
15 must enter a sorting procedure 102. Within the sorting procedure 102, the data first undergoes processing by a sort utility 102a, which sorts the masters and extracts maintenance records. Two sets of resulting data, the sorted FLR monthly master data 102b and the FLR maintenance records 102c, then separately serve as input to the program for Year-to-Date Master Maintenance 101. In addition to the monthly
20 data from the Monthly Master 100 and the sorted 102b and maintenance data 102c, the Year-to-Date Master from the Current Year 103 serves as additional input to the update to the program for Year-to-Date Master Maintenance 101. The resulting data comprises the New Year-to-Date Master for the Current Year 103. At Citibank, in the months of January and February only, an additional processing step
25 105 is required to complete the Year-to-Date Master for the Previous Year. The existing data for the Year-to-Date Master from the Previous Year 105a is input into the program for Year-to-Date Master Maintenance 101, and a resultant New Year-to-Date Master for the Previous Year 105b is produced.

30 The present invention thus provides a method and system for collecting, reporting, and other loan analysis information management for a large financial institution. In particular, the system assists a financial institution with extracting

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relevant data from all of its legal entities and storing this data in a common repository in a normalized fashion such that the institution may prepare reports to assist with or fulfill compliance with federal law, such as the CRA and HMDA.

- 5 Detailed examples of the invention have now been described in fulfillment of the above-mentioned objects. Many other features and modifications will be apparent to those skilled in the art without departing from the spirit and scope of the invention. It is therefore intended that the invention be limited only as described in the appended claims.

US2014789.082097

WHAT IS CLAIMED IS:

1 1. A method for storing and compiling data for analysis and reporting
2 regarding a financial institution's compliance with fair lending laws, said method
3 comprising the steps of:

4 a) automatically extracting data relative to the fair lending laws from a
5 plurality of sources;

6 b) automatically reformatting said data so that said data is in a standard
7 format;

8 c) automatically normalizing said data;

9 d) automatically storing the data in a repository;

10 d) automatically integrating said data with previously stored data; and

11 e) preparing reports from said integrated data and said previously stored
12 data on a periodic basis to indicate the fair lending compliance of the financial
13 institution.

1 2. The method according to claim 1, further comprising the step of:

2 f) transmitting said reports prepared in step e) to regulators of the financial
3 institution.

1 3. The method according to claim 2, wherein the step f) of electronically
2 transmitting said reports further comprises transmitting the reports on a
3 predetermined date to regulators.

1 4. The method according to claim 2, wherein said regulators include the
2 OCC, FRS, FDIC, and OTS.

1 5. The method according to claim 1, further comprising the step of:

2 g) automatically geo-coding said data before integrating said data with said
3 previously stored data.

6. The method according to claim 1, wherein said step a) of extracting is performed on a regular basis.

7. The method according to claim 6, wherein said step a) of extracting is performed on a monthly basis.

8. The method according to claim 1, wherein said plurality of sources includes branches of a financial institution.

9. The method according to claim 8, wherein said plurality of sources includes at least one from the group of bankcard processing centers, student loan processing centers, business loan processing centers, and US territorial locations of the financial institution.

10. The method according to claim 1, wherein said reports include reports required by federal regulators under the fair lending laws.

11. An apparatus for performing fair lending compliance data collection and analysis within a financial institution, comprising:

a) a plurality of feeds, one for each business unit within the financial institution, each of said feeds providing fair lending data in a potentially different format;

b) standardizing and normalizing means for standardizing and normalizing said data received from said feeds;

c) a repository for receiving said standardized and normalized data and for storing the standardized and normalized data; and

d) a workstation for outputting compliance reports and analysis using said data, wherein said workstation reports fair lending data either on an individual business unit basis or for the whole financial institution.

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1 12. The apparatus of claim 11 wherein said standardizing and normalizing
2 means comprises a mainframe computer.

1 13. The apparatus of claim 11 wherein said repository comprises a
2 mainframe computer.

1 14. The apparatus of claim 11 wherein said repository comprises a server
2 on a network.

1 15. The apparatus of claim 11 wherein said workstation comprises a
2 personal computer.

1 16. A device for enabling a financial institution to comply with fair lending
2 laws, comprising:

3 a) extracting means for automatically extracting data relative to the fair
4 lending laws from a plurality of sources;

5 b) reformatting means for automatically reformatting said data so that said
6 data is in a standard format;

7 c) normalizing means automatically normalizing said data;

8 d) storing means for automatically storing the data in a repository;

9 d) integrating means for automatically integrating said data with previously
10 stored data; and

11 e) preparing means for preparing reports from said integrated data and said
12 previously stored data on a periodic basis to indicate the fair lending compliance of
13 the financial institution.

1 17. The device according to claim 16, further comprising transmitting
2 means for transmitting said reports prepared by said integrating means to regulators
3 of the financial institution.

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1 18. The device according to claim 17, wherein said regulators include at
2 least one from the group of OCC, FRS, FDIC and OTS.

1 19. The device according to claim 16, further comprising geo-coding means
2 for geo-coding said data before integrating said data with said previously stored
3 data.

1 20. The device according to claim 16, wherein said reports include
2 indication of CRA and HMDA compliance based on each individual business unit
3 and indication of CRA and HMDA compliance based on the entire financial
4 institution.

1 21. The device according to claim 16, further comprising interacting means
2 for interacting with said data in the storage means to enable determination of trend
3 analysis for said data.

1 22. The device according to claim 16, further comprising:
2 a) backing up means for backing up said data stored in said storing means;
3 b) archiving means for archiving said data stored in said storing means; and
4 c) purging means for purging said data stored in said storing means.

ABSTRACT

The present invention discloses a method and system for collecting, standardizing, and analyzing lending data from all the offices of a financial institution, including information on small business, home equity, motor vehicle, credit card, mortgage, other secured and unsecured consumer products for commercial, community development, not-for-profit, and consortium customers. The invention enables data collection and analysis in a timely fashion such that interim reports may be prepared so that changes in lending practices can be implemented to assist with assuring compliance with the fair lending acts. A central repository is linked to all of the offices of the financial institution, and data mapping features are used to provide standardized reporting so that all data will be reported in a standardized form. The system processes, collects and standardizes information on new loans, renewals, credit line increases and application decisions for all of the business units within a financial institution. The present invention permits internal management reporting for review of performances against the CRA and HMDA plans. It also permits preparation of the reports for filing with the federal regulatory agencies, such as OCC, FRS and OTS. Furthermore, the present invention permits rapid response to federal regulatory agency audits of reported CRA and HMDA information.

FIG 2

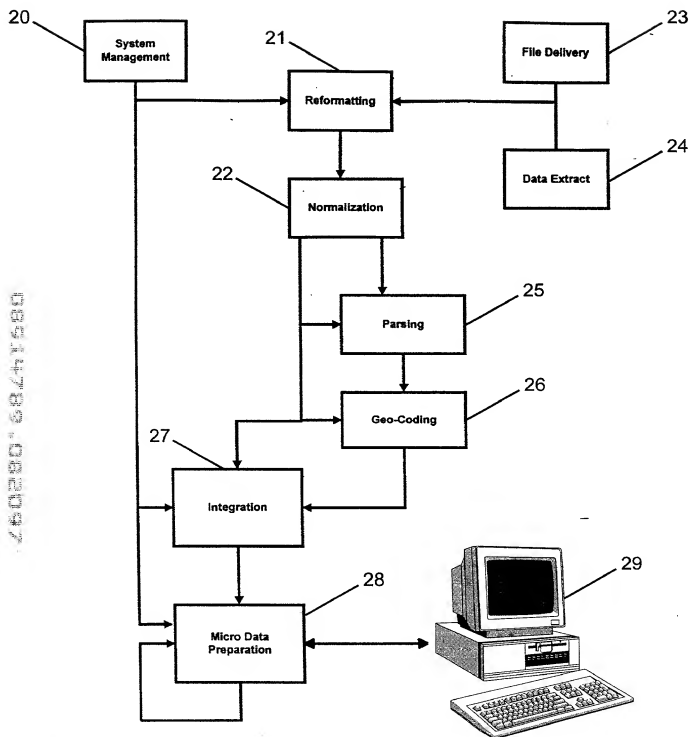


FIG 3

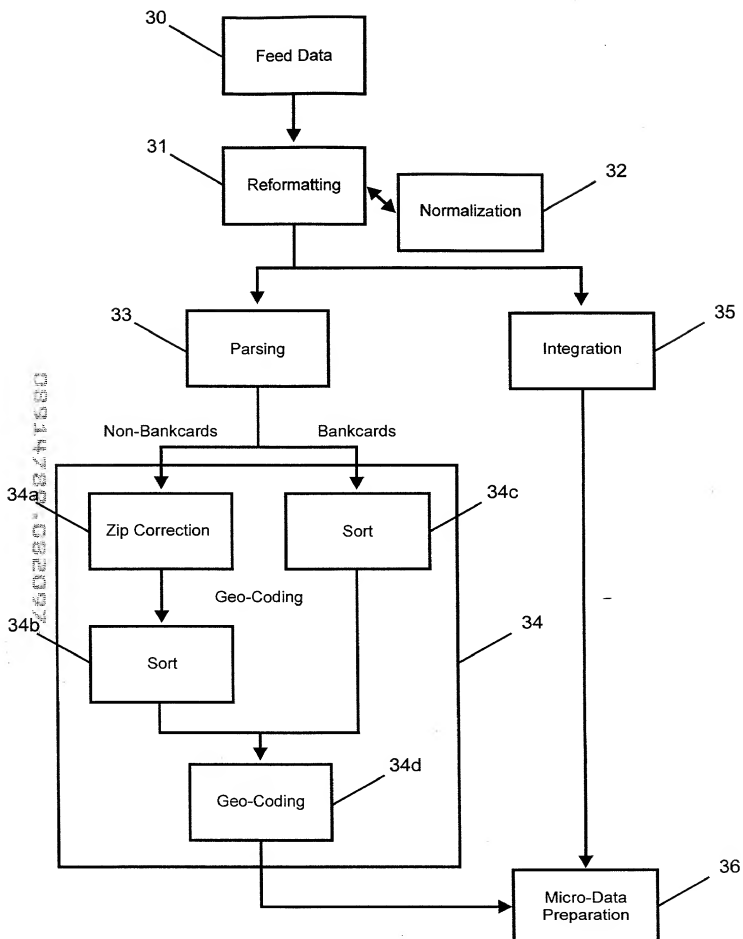


FIG 4A1

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FIELD REQUIRED	PRIVATE BANK LOANS FIELD	NOTES
ACCOUNT INFORMATION		
Customer Type	WS-PBLOAN-BUSINESS-IND	If equal to 'C', the account is corporate; if 'I', the account belongs to an individual. If field is blank, default value is 'I' (Individual).
Business Entity	WS-PBLOAN-BUSINESS-ENTITY	WS-PBLOAN-BUSINESS-ENTITY contains one of the following values: PBUS Private Bank U.S. PBWH Private Bank Western Hemisphere PBFSB Private Bank FSB
	WS-PBLOAN-ACCT-FSB-BUSINESS	
		All PBUS and PBWH accounts are credited to the Private Bank and assigned to FIMP Code 001. If the value of this field is equal to PBFSB, the value in WS-PBLOAN-ACCT-FSB-BUSINESS is used to determine the breakout of these accounts by business; this field contains the valid FIMP codes for the FSB businesses.
Branch Code	WS-PBLOAN-EXP-CODE	This field contains the Private Bank expense code.
Purchased / Originated ID	Not applicable.	

FIELD REQUIRED	PRIVATE BANK LOANS FIELD	NOTES
Loan Number	WS-PBLOAN-ACCT-NUMBER or WS-PBLOAN-ACCT-CRA-COMMITMENT- NO	See processing notes below.
Open Date	WS-PBLOAN-CRA-ORIGINAL-DATE	Contains the date the commitment or loan was approved.
Original Amount Loan / Line	WS-PBLOAN-ACCT-CRA-CA- AMOUNT	Contains the amount of the loan or commitment when the loan / commitment was first approved.
Renewal Date	WS-PBLOAN-ACCT-CRA-RENEWAL- DATE	Only used if WS-PBLOAN-BUSINESS-IND is equal to 'C'; this field contains the date a corporate commitment was last renewed.
Renewal Amount	WS-PBLOAN-ACCT-CRA-RENEWAL- AMOUNT	Only used if WS-PBLOAN-BUSINESS-IND is equal to 'C'; this field contains the amount of the last corporate commitment renewal.
Line Increase Date	WS-PBLOAN-ACCT-INCREASE-DATE	This field contains the date of the last line increase for this account / commitment. Reset to zero at month end.
Line Increase Amount	WS-PBLOAN-ACCT-INCREASE- AMOUNT	This field contains the total of line increases in the current month for this loan / commitment. Individual line increases within the current month are not broken out.
Product Code	WS-PBLOAN-PROD-CODE WS-PBLOAN-BUSINESS-IND WS-PBLOAN-ACCT-CRA-SECURED- CODE	See processing notes below. CRA only processes records where the Product Code field is equal to 'CMT' (Commitment) or 'LNS' (Full Earning Loan).
Sub Product Code	Not applicable.	
Customer's Address	If populated: WS-PBLOAN-ACCT-CRA-ADDRESS (occurs 3) or WS-PBLOAN-ACCT-ADDRESS1 - WS-PBLOAN-ACCT-ADDRESS4 WS-PBLOAN-ACCT-CRA-CITY or WS-PBLOAN-ACCT-CITY	If populated, the first field (three occurrences) contains the address of the property used to secure this loan; otherwise, use the existing fields for the customer's address. The new address field contains the address used to perform a credit check; existing fields contain the customer's address.
City	WS-PBLOAN-ACCT-CRA-CITY or WS-PBLOAN-ACCT-CITY	Note: Where City and State are not populated, the last address line is checked for the presence of this information.
State	WS-PBLOAN-ACCT-CRA-STATE or WS-PBLOAN-ACCT-STATE	
Zip	WS-PBLOAN-ACCT-CRA-ZIP or WS-PBLOAN-ACCT-ZIP	The existing feed does not contain Zip + 4 information. Zip + 4 information provided in new field if entered by operator.
Current Year / Applicant Income	WS-PBLOAN-ACCT-CRA-SALES- REVENUE or WS-PBLOAN-ACCT-CRA-ANNUAL- INCOME	If the value of WS-PBLOAN-CRA-BUSINESS-IND = 'C', use WS-PBLOAN-ACCT-CRA-SALES-REVENUE; if the value is 'I' or blank, use WS-PBLOAN-ACCT-CRA-ANNUAL-INCOME.

FIG 4A3

FIELD REQUIRED		PRIVATE BANK LOANS FIELD	NOTES
		GEOCODED INFORMATION	
State		To be provided by CRA process.	
County			
Census Tract			
MSA			

PBLN PRODUCT CODE	DESCRIPTION	CUSTOMER TYPE	SECURED CODE	CRA PRODUCT CODE
CMT	Commitment	Retail	Secured	07 -- Other Secured Consumer Loans
			Not Secured	08 -- Other Unsecured Consumer Loans
LNS	Full earning loan	Retail	Secured	07 -- Other Secured Consumer Loans
			Not Secured	08 -- Other Unsecured Consumer Loans
CMT	Commitment	B&P	Secured	03 -- Other Sec Lines of Credit for Purposes of Small Business
			Not Secured	01 -- Small Business
LNS	Full earning loan	B&P	Secured	03 -- Other Sec Lines of Credit for Purposes of Small Business
			Not Secured	01 -- Small Business

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U.S. / INDOOR MARKETING SALARY REPORT
SECTOR CIGARETTE UPDATE
CXA / INDOOR CONTROL REPORT BY SOURCE PRODUCT

80a
80b
80c
80d
80e
80f
80g
80h
80i
80j
80k

SOURCE	PRIVATE BANK LOANS	PRODUCT DTL KEY	DESCRIPTION	LOAN 1	LOAN 2	80c	80d	80e	80f	80g	80h	80i	TOTAL LOAN 1	TOTAL LOAN 2
001PRBA000100			MONTHLY PAYMENT BUSINESS LOAN	9	9,999,999.99	9	9,999,999.99	9	9,999,999.99	9	9,999,999.99	18	18	18,999,999.98
001PRBA000101			MONTHLY PAYMENT BUSINESS LOAN	9	9,999,999.99	9	9,999,999.99	9	9,999,999.99	9	9,999,999.99	18	18	18,999,999.98
001PRBA000102			MONTHLY PAYMENT BUSINESS LOAN	9	9,999,999.99	9	9,999,999.99	9	9,999,999.99	9	9,999,999.99	18	18	18,999,999.98
001PRBA000103			MONTHLY PAYMENT BUSINESS LOAN	9	9,999,999.99	9	9,999,999.99	9	9,999,999.99	9	9,999,999.99	18	18	18,999,999.98
001PRBA000104			MONTHLY PAYMENT BUSINESS LOAN	9	9,999,999.99	9	9,999,999.99	9	9,999,999.99	9	9,999,999.99	18	18	18,999,999.98
			BUSINESS SUB-TOTAL	99	99,999,999.99	99	99,999,999.99	99	99,999,999.99	99	99,999,999.99	198	198	198,999,999.98
			GRAND TOTAL	214	240,000,000.04	214	240,000,000.04	214	240,000,000.04	214	240,000,000.04	468	468	480,000,000.08

FIG 4D

FIELD NAME	DESCRIPTION
80a Data Source	Identifies the System that supplied the source file (e.g., Private Bank Loans, ACAPS).
80b Product Detail Key	This field can be broken down as follows: Positions 1 - 3 - contains the FIMP code of the business. Positions 4 - 7 - Code that identifies the source of these records. Positions 8 - 14 - Product Code as received on the source file. There is one line entry for every Business / Source / Product Code combination.
80d Description	Free form description of the product.
80e CRA Loans	Total number of extracted CRA loans for this product.
80f CRA Loan \$	Total CRA loan amount for this product.
80g HMDA Loans	Total number of extracted HMDA loans for this product.
80h HMDA Loan \$	Total HMDA loan amount for this product.
80i Total Loans	Total number of loans extracted this period for this product. The total number of CRA + HMDA loans (Field 4 + Field 6) may be greater than the total number of loans in this field, as some accounts may be eligible for both CRA and HMDA.
80j Total Loan \$	Total loan amount processed for this product. This amount will always equal the total CRA + HMDA loan amounts.
80k Business Sub-Total	Provides breakdown of CRA / HMDA by business.
Grand Total	CRA / HMDA grand totals for the entire source file.

FIG 4E
650220 66241600

85d

85c

85b

85g

85k

U.S. / EUROPE MARKETING BANK SUPPORT				REPORT NO: SBHMKCT-002	
CIA / INDA CONTROL REPORT BY CIA / INDA PRODUCT				PAGE NO: 1	
RUN DATE	85d	85e	85f	85g	
MM/DD/YY	85h	85i	85j	85k	
ROW	85l	85m	85n	85o	
SOURCE	85p	85q	85r	85s	
PRIVATE BANK LOANS	85t	85u	85v	85w	
DESCRIPTION	85x	85y	85z	85aa	
85ab	85ac	85ad	85ae	85af	
85ag	85ah	85ai	85aj	85ak	
85al	85am	85an	85ao	85ap	
85aq	85ar	85as	85at	85au	
85av	85aw	85ax	85ay	85az	
85ba	85bb	85bc	85bd	85be	
85bf	85bg	85bh	85bi	85bj	
85bk	85bl	85bm	85bn	85bo	
85bp	85bq	85br	85bs	85bt	
85bu	85bv	85bw	85bx	85by	
85bz	85ca	85cb	85cc	85cd	
85ce	85cf	85cg	85ch	85ci	
85cj	85ck	85cl	85cm	85cn	
85co	85cp	85cq	85cr	85cs	
85ct	85cu	85cv	85cw	85cx	
85cy	85cz	85da	85db	85dc	
85dd	85de	85df	85dg	85dh	
85di	85dj	85dk	85dl	85dm	
85dn	85do	85dp	85dq	85dr	
85ds	85dt	85du	85dv	85dw	
85dx	85dy	85dz	85ea	85eb	
85ec	85ed	85ee	85ef	85eg	
85eh	85ei	85ej	85ek	85el	
85em	85en	85eo	85ep	85eq	
85er	85es	85et	85eu	85ev	
85ew	85ex	85ey	85ez	85fa	
85fb	85fc	85fd	85fe	85ff	
85fg	85fh	85fi	85fj	85fk	
85fl	85fm	85fn	85fo	85fp	
85fq	85fr	85fs	85ft	85fu	
85fv	85fw	85fx	85fy	85gz	
85ga	85gb	85gc	85gd	85ge	
85gf	85gg	85gh	85gi	85gj	
85gk	85gl	85gm	85gn	85go	
85gp	85gq	85gr	85gs	85gt	
85gu	85gv	85gw	85gx	85gy	
85gz	85ha	85hb	85hc	85hd	
85he	85hf	85hg	85hh	85hi	
85hj	85hk	85hl	85hm	85hn	
85ho	85hp	85hq	85hr	85hs	
85ht	85hu	85hv	85hw	85hx	
85hy	85hz	85ia	85ib	85ic	
85id	85ie	85if	85ig	85ih	
85ii	85ij	85ik	85il	85im	
85in	85io	85ip	85iq	85ir	
85is	85it	85iu	85iv	85iw	
85ix	85iy	85iz	85ja	85jb	
85jc	85jd	85je	85jf	85jg	
85jh	85ji	85jj	85jk	85jl	
85jm	85jn	85jo	85jp	85jq	
85jr	85js	85jt	85ju	85jv	
85jw	85jx	85jy	85jz	85ka	
85kb	85kc	85kd	85ke	85kf	
85kg	85kh	85ki	85kj	85kl	
85km	85kn	85ko	85kp	85kq	
85kr	85ks	85kt	85ku	85kv	
85kw	85kx	85ky	85kz	85la	
85lb	85lc	85ld	85le	85lf	
85lg	85lh	85li	85lj	85lk	
85lm	85ln	85lo	85lp	85lq	
85lr	85ls	85lt	85lu	85lv	
85lw	85lx	85ly	85lz	85ma	
85mb	85mc	85md	85me	85mf	
85mg	85mh	85mi	85mj	85mk	
85ml	85mn	85mo	85mp	85mq	
85mr	85ms	85mt	85mu	85mv	
85mw	85mx	85my	85mz	85na	
85nb	85nc	85nd	85ne	85nf	
85ng	85nh	85ni	85nj	85nk	
85nl	85nm	85no	85np	85nq	
85nr	85ns	85nt	85nu	85nv	
85nw	85nx	85ny	85nz	85oa	
85ob	85oc	85od	85oe	85of	
85og	85oh	85oi	85oj	85ok	
85ol	85om	85on	85oo	85op	
85oq	85or	85os	85ot	85ou	
85ov	85ow	85ox	85oy	85oz	
85pa	85pb	85pc	85pd	85pe	
85pf	85pg	85ph	85pi	85pj	
85pk	85pl	85pm	85pn	85po	
85pp	85pq	85pr	85ps	85pt	
85pu	85pv	85pw	85px	85py	
85pz	85qa	85qb	85qc	85qd	
85qe	85qf	85qg	85qh	85qi	
85qj	85qk	85ql	85qm	85qn	
85qo	85qp	85qq	85qr	85qs	
85qt	85qu	85qv	85qw	85qx	
85qy	85qz	85ra	85rb	85rc	
85rd	85re	85rf	85rg	85rh	
85ri	85rj	85rk	85rl	85rm	
85rn	85ro	85rp	85rq	85rr	
85rs	85rt	85ru	85rv	85rw	
85rx	85ry	85rz	85sa	85sb	
85sc	85sd	85se	85sf	85sg	
85sh	85si	85sj	85sk	85sl	
85sm	85sn	85so	85sp	85sq	
85sr	85ss	85st	85su	85sv	
85sw	85sx	85sy	85sz	85ta	
85tb	85tc	85td	85te	85tf	
85tg	85th	85ti	85tj	85tk	
85tl	85tm	85tn	85to	85tp	
85tq	85tr	85ts	85tu	85tv	
85tw	85tx	85ty	85tz	85ua	
85ub	85uc	85ud	85ue	85uf	
85ug	85uh	85ui	85uj	85uk	
85ul	85um	85un	85uo	85up	
85uq	85ur	85us	85ut	85uu	
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85uv	85uv	85uv	85uv	85uv	
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85uv	85uv	85uv	85uv	85uv	
85uv	85uv				

FIELD NAME	DESCRIPTION
85a Source	Identifies the System that supplied the source file (e.g., Private Bank Loans, ACAPS).
85b Bus(iness)	Contains the business' FIMP code.
85c C / H (CRA / HMDA)	CRA / HMDA Indicator (C = CRA, H = HMDA)
85d Product	Contains the government CRA or HMDA product code.
85e Description	Contains a description of the CRA / HMDA product code.
85f Loans	Number of loans extracted this processing period for this CRA / HMDA product code.
85g Loan \$	Total loan amount extracted this month for this CRA / HMDA product code.
85h CRA Sub-Total	Total CRA number and loan amounts extracted this month for this business.
85i HMDA Sub-Total	Total HMDA number and loan amounts extracted this month for this business.
85j Business Sub-Total	Total number and loan amounts extracted this month for this business.
85k Grand Total	Total number and loan amounts extracted this month from this source file for all businesses.

90a

REPORT NO. BRKEXX-803
PAGE NO: 1U.S. / EUROPE MARKETING SALES SUPPORT
CNA / BNA SOURCE FILE RECONCILIATION REPORTRUN DATE: MM/DD/YY
RUN TIME: HH:MM:SS

SOURCE: PRIVATE BANK LOANS

BUSINESS: 001 - NEW YORK BANK

90b

TOTAL LOANS ON FILE: 99,999 LOAN \$: 99,999,999.99

TOTAL LOANS EXTRACTED:

9,999 LOAN \$: 9,999,999.99

CNA TOTALS

ORIGINATIONS:

999 LOAN \$: 999,999.99

RENEWALS:

999 LOAN \$: 999,999.99

LINE INCREASES:

99 LOAN \$: 999,999.99

MAINTENANCE:

9 LOAN \$: 99,999.99

BNA TOTALS

PIPELINE:

9 LOAN \$: 99,999.99

APPROVED:

9 LOAN \$: 99,999.99

NOT APPROVED:

9 LOAN \$: 99,999.99

DENIED:

9 LOAN \$: 99,999.99

WITHDRAWN:

9 LOAN \$: 99,999.99

FILE CLOSED:

9 LOAN \$: 99,999.99

PURCHASED:

9 LOAN \$: 99,999.99

MAINTENANCE:

9 LOAN \$: 99,999.99

90c

90d

90e

90f

FIELD NAME	DESCRIPTION
Source	Identifies the System that supplied the source file (e.g., Private Bank Loans, ACAPS).
Bus(iness)	Contains the business' FIMP code.
Total Loans on File	Details the total number of loans / loan amounts on the source file for this business.
Total Loans Extracted	The total number of loans / amounts extracted from the source file for the current processing period.
CRA Totals	The total number of CRA loans / amounts extracted from this file for the current processing period. Further breakdown is provided for loan Originations, Renewals, Line Increases, and Maintenance records.
HMDA Totals	The total number of HMDA loans / amounts extracted from this file for the current processing period. Further breakdown is provided for each HMDA Action Code, and Maintenance records.

90a

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FIG 4 I

U.S. / EUROPE MARKETING SALES SUPPORT
 RUN DATE: 04/02/97
 RUN TIME: 11:04:52
 REPORT NO: 888444-803
 PAGE NO: 1

CNA / INSEA SOURCE FILE RECONCILIATION REPORT

SOURCE: PRIVATE BANK LOANS

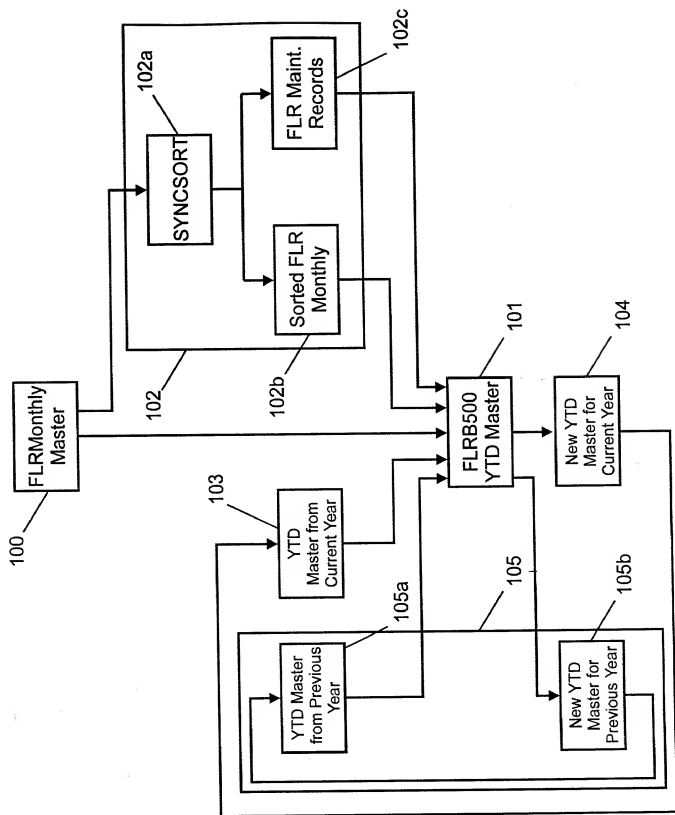
GRAND TOTALS - ALL BUSINESSES

TOTAL LOANS ON FILE:	99,999	LOAN \$:	999,999,999.99
TOTAL LOANS EXTRACTED:	9,999	LOAN \$:	9,999,999.99
CNA TOTALS			
ORIGINATIONS:	999	LOAN \$:	999,999.99
RENEWALS:	999	LOAN \$:	999,999.99
LINE INCREASES:	99	LOAN \$:	999,999.99
MAINTENANCE:	9	LOAN \$:	99,999.99
INSEA TOTALS			
PIPELINE:	9	LOAN \$:	99,999.99
APPROVED:	9	LOAN \$:	99,999.99
NOT APPROVED:	9	LOAN \$:	99,999.99
DENIED:	9	LOAN \$:	99,999.99
WITHDRAWN:	9	LOAN \$:	99,999.99
FILE CLOSED:	9	LOAN \$:	99,999.99
FORWARDED:	9	LOAN \$:	99,999.99
MAINTENANCE:	9	LOAN \$:	99,999.99

FIGURE 4

[illegible]

FIELD NAME	DESCRIPTION
95a Product Detail Key	This field can be broken down as follows: Positions 1 - 3 - Contains the business' FIMP Code. Positions 4 - 7 - Code that identifies the source of these records. Positions 8 - 14 - Product Code as received from the business. There is one line entry for every Business / Source / Product Code combination.
95b Description	Free form description of the product.
95c Category	Contains the CRA Product Code field.
95d Service	Contains standard Sector CIDBase marketing values. Can be used to further analyze / group product types.
95e PType	
95f SType	
95g Rank	
95h Total Records	Total number of records extracted for each Product Detail Key combination.
95i Total Balances	Total balance for each Product Detail Key combination.
95j Service Sub Total	Total number of Accounts / Balances extracted for each marketing Service Category identified by this job.
95k Category Sub Total	Total number of Accounts / Balances processed for each CRA Product Code.
95m Grand Total	Grand Total of all accounts extracted this month.



DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

English Language Declaration

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled METHOD AND SYSTEM FOR PERFORMING CRA, HMDA, AND FAIR LENDING ANALYSIS AND REPORTING FOR A FINANCIAL INSTITUTION; the specification of which (check one)

☒ is attached hereto.

_____ was filed on _____ as

_____ Application Serial No. _____

_____ and was amended on _____ (if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent of inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)

Priority Claimed

(Number) (Country) (Day/Month/Year Filed)

☐ ☐
Yes No

(Number) (Country) (Day/Month/Year Filed)

☐ ☐
Yes No

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code §112, I acknowledge the duty to disclose material to patentability as defined in Title 37, Code of Federal Regulations, §1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

(Application Serial No.)

(Filing Date)

(Status)
(patented, pending, abandoned)

(Application Serial No.)

(Filing Date)

(Status)
(patented, pending, abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

English Language Declaration

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

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Michael D. Bednarek, Registration No. 32,329; and; Richard Peterson, Registration No. 35,320.

Send Correspondence to:

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(202) 508-5800

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Full name of second joint inventor: William T. CALDON

Second Inventor's signature

Date

Residence: Floral Park, New York

Citizenship: U.S.A.

Post Office Address: 73 Cypress Street, Floral Park, NY 11001

